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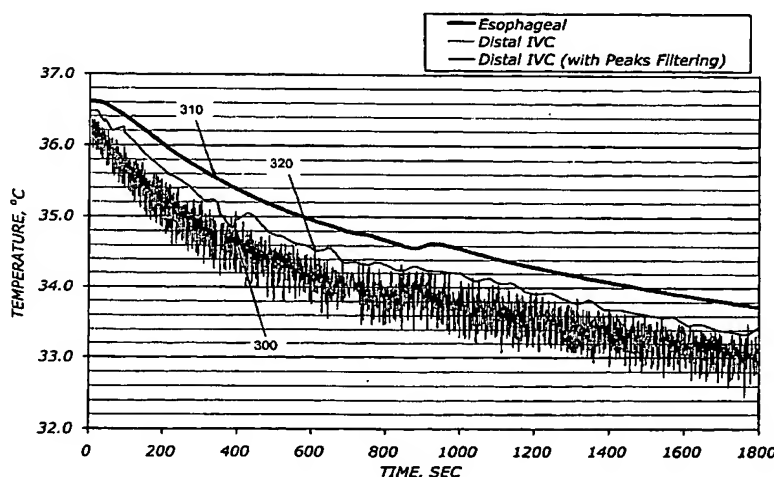
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(54) Title: SYSTEM AND METHOD FOR DETERMINING AND CONTROLLING CORE BODY TEMPERATURE



(57) Abstract: Systems and methods for accurate temperature modification of a patient, or selected regions thereof, including inducing hypothermia. The temperature modification is accomplished using an in-dwelling heat exchange catheter within which a fluid heat exchange medium circulates. A heat exchange cassette attached to the circulatory flow lines of the catheter, the heat exchange cassette being sized to engage a cavity within a control unit. A temperature measurement scheme for obtaining body core temperature is provided, including methods of obtaining and analyzing temperature data to provide feedback to the control unit for use in controlling the heating and cooling of the heat exchange medium so as to heat or cool a patient to a desired target temperature.